



US009072599B2

(12) **United States Patent**
Kadziauskas et al.

(10) **Patent No.:** **US 9,072,599 B2**
(45) **Date of Patent:** **Jul. 7, 2015**

(54) **FIXATION OF OPHTHALMIC IMPLANTS**

(56) **References Cited**

(75) Inventors: **Kenneth E. Kadziauskas**, Coto de Caza, CA (US); **Carina R. Reisin**, Tustin, CA (US); **Timothy R. Bumbalough**, Fullerton, CA (US)

(73) Assignee: **Abbott Medical Optics Inc.**, Santa Ana, CA (US)

(*) Notice: Subject to any disclaimer, the term of this patent is extended or adjusted under 35 U.S.C. 154(b) by 478 days.

(21) Appl. No.: **12/870,570**

(22) Filed: **Aug. 27, 2010**

(65) **Prior Publication Data**

US 2011/0054601 A1 Mar. 3, 2011

Related U.S. Application Data

(60) Provisional application No. 61/237,520, filed on Aug. 27, 2009.

(51) **Int. Cl.**
A61F 2/16 (2006.01)
A61F 9/007 (2006.01)
A61F 2/00 (2006.01)

(52) **U.S. Cl.**
CPC **A61F 2/16** (2013.01); **A61F 2220/0016** (2013.01); **A61F 2/1635** (2013.01); **A61F 9/00781** (2013.01); **A61F 2002/009** (2013.01); **A61F 2250/0003** (2013.01)

(58) **Field of Classification Search**
CPC **A61F 2/16–2/1689**; **A61F 2220/0008–2220/0016**
USPC **623/6.37–6.55, 6.22, 6.5, 6.16, 6.34**
See application file for complete search history.

U.S. PATENT DOCUMENTS

4,361,913 A	12/1982	Streck
4,370,760 A	2/1983	Kelman
4,373,218 A	2/1983	Schachar
4,442,553 A	4/1984	Hessburg
4,474,751 A	10/1984	Haslam et al.

(Continued)

FOREIGN PATENT DOCUMENTS

CH	681687 A5	5/1993
EP	766540 A1	4/1997

(Continued)

OTHER PUBLICATIONS

International Search Report for Application No. PCT/US2010/047011, mailed on Feb. 16, 2011, 7 pages.

(Continued)

Primary Examiner — Paul Prebilic

(74) *Attorney, Agent, or Firm* — Abbott Medical Optics Inc.

(57) **ABSTRACT**

An accommodating intraocular lens (aIOL) is disclosed, with an optic that changes shape in response to an ocular force exerted by the zonules of the eye. A haptic supports the optic around its equator and couples the optic to the capsular bag of the eye. A surface adherent improves the accommodative performance of the haptic, such that compressive/tensile forces may be more efficiently transferred from the haptic to optic. One way to enhance force transfer is to provide a surface layer of an adhesive to the haptic and/or optic, for instance a reversible bioadhesive material. Or, portions of the exterior surface of the IOL may have microfibers thereon that mimic the adhesive properties of Gecko feet. Another aspect is application of a reversible bioadhesive material to the interior of the empty capsular bag prior to introduction of an injectable polymer IOL.

6 Claims, 7 Drawing Sheets

